

**SYSTEM AND METHOD FOR PROVIDING A  
SELF HEATING ADJUSTABLE  $\text{TiSi}_2$  RESISTOR**

**ABSTRACT OF THE DISCLOSURE**

5           A system and method is disclosed for providing a self heating adjustable titanium disilicon ( $\text{TiSi}_2$ ) resistor. A triangularly shaped layer of polysilicon is placed a layer of insulation material. A layer of titanium is applied over the polysilicon and  
10   heated to form a layer of C49 type of  $\text{TiSi}_2$ . A current is then applied to the small end of the triangularly shaped layer of C49  $\text{TiSi}_2$ . The current generates heat in a high resistance portion of the triangularly shaped layer of C49  $\text{TiSi}_2$  and converts a portion of the C49  $\text{TiSi}_2$  to C54  $\text{TiSi}_2$ . The lower resistance of the C54  $\text{TiSi}_2$   
15   decreases the effective resistance of the resistor. A desired value of resistance may be selected by adjusting the magnitude of the applied current.